

On Indian and Nepalese Dermaptera from the Muséum d'Histoire naturelle at Genève

by

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With 14 figures

ABSTRACT

A revision of the North Indian and Nepalese Dermaptera material preserved in the Muséum d'Histoire naturelle, Genève. 22 known species have been identified, and following 8 new species are described in the present paper: *Echinosoma ater*, *Ctenisolabis aciculata*, *C. loebli*, *Brachylabis tegminata*, *Isolaboides rimosus*, *Liparura montuosa*, *Oreasiobia piger*, *O. similis*.

Since several years I have studied collections of Dermaptera of various European museums. Through the kindness of Dr. Ivan Löbl I had the opportunity to examine the earwings of the Geneva Museum collected recently in North India¹ and Nepal.

Family PYGIDICRANIDAE Verhoeff, 1902

Subfamily ECHINOSOMATINAE Burr, 1910

Echinosoma trilineatum Borelli, 1921

Echinosoma trilineatum Borelli, 1921, *Bull. Mus. natn. Hist. nat. Paris*, 1921: 77. —
Terra typica: South India.

General colour dark brown, mouthparts, usually two proximal antennal joints, a lateral and caudo-medial triangular spot on pronotum, discal and sublateral stripe

¹ Specimens mentioned from West Bengal, Assam, and Meghalaya were collected on a trip effected with a grant of the "Bourse de voyage de la Société helvétique des sciences naturelles".

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on tegmina, inner margins of wings, a median and sublateral stripe on abdomen, yellowish. Male forceps evenly curved, moderately pubescent proximad, cylindrical. Pygidium hidden, sparsely pubescent, its caudo-lateral angles tuberculate. Male genitalia broad, oval; central parameral plate with small median longitudinal incision between external parameres. Genital lobes fully developed, virga long, slender, a little undulate.

Distribution: India.

Material examined: India, Assam, Manas, 200 m, 22.X.1978, 1 female; ditto, Meghalaya, Khasi Hills, 10-12 km au nord-ouest de Dowki, 500-800 m, 29.X.1978, legit: Besuchet, Löbl, 1 male; ditto, Garo Hills, 7 km au sud de Dainadubi, 250 m, 4.XI.1978, legit: Besuchet, Löbl, 4 males, and 1 female; ditto, Kumaon (UP), Bhim Tal, 1450-1550 m, 5.X.1979, legit: Löbl, 1 female.

Echinosoma ater sp. n.

Male general colour very dark reddish black, except palpus maxillaris, scape ventrally, and genu of legs, yellowish. Head, pronotum, tegmina and wings strongly coriaceous, abdomen punctate dorsally. Head broad, eyes slightly longer than genae. Postfrontal and coronal sutures indistinct. Antennae broken in holotype, first joint moderately short, bicolour, black dorsally, and yellow ventrally, rest joints black. Pronotum rounded, a little transverse, lateral margins more or less paralell-sided. Tegmina well developed, wings fully developed. Ultimate tergite typical, very broad, simple. Forceps (Fig. 1) of *Echinosoma*-type, strongly curved, cylindrical in cross-section. Penultimate sternite normal, a little excised at median posterior margin. Genitalia (Fig. 2, gen. prep. No. 787, det. Dr. H. Steinmann) characteristic; central parameral plate well developed, comparatively large, median incision of anterior margin very deep; genital lobes well developed, with virgae undulate, virga within genital lobe with chitinous sclerites. External parameres typical, but inner margin excised medially.

Length of body with forceps: 15,5 mm.

Female unknown.

Holotype male: India, Assam, Manas, 200 m, 22.X.1978, legit: Besuchet, Löbl, gen. prep. No. 787, det. Dr. H. Steinmann. — Deposited in the Muséum d'Histoire naturelle, Genève.

Its nearest ally is *Echinosoma convolutum* Hincks, with the following differences:

	<i>E. ater</i> sp. n.	<i>E. convolutum</i> Hincks
General colour	black	chocolate-brown
Postfrontal and coronal sutures	indistinct	distinct
Pygidium	broader than long	quadrate
Genital lobe	with chitinous sclerite	without chitinous sclerite

Family CARCINOPHORIDAE Popham, 1965

Subfamily BRACHYLABIINAE Burr, 1909

Ctenisolabis fletcheri Burr. 1910

Ctenisolabis fletcheri Burr, 1910, *Fauna of British India*, Dermaptera, p. 110. — Terra typica: Ceylon. — *Isolabis fletcheri* (Burr, 1910); POPHAM & BRINDLE 1966, *Entomo-*

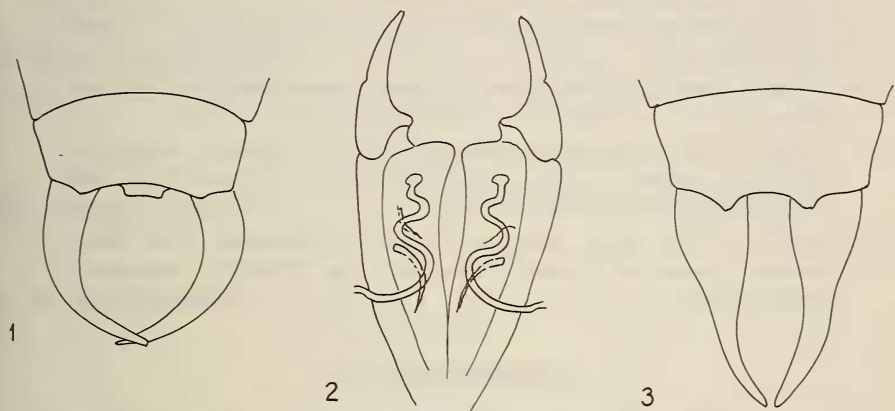
logist 99: 245. — *Ctenisolabis fletcheri* Burr, 1910; STEINMANN 1977, *Annl. hist.-nat. Mus. natn. hung.* 69: 96.

Female black or a little dark reddish black, shining; head, thoracic nota and abdominal tergites strongly punctured; femora bicolour, yellowish apically, and dark brown basally. Tegmina and wings absent. Mesonotum ample, lateral longitudinal keels very distinct. Ultimate tergite broad, posterior margin concave at median section.

Male unknown.

Distribution: Sri Lanka, India: West Bengal.

Material examined: India, W. Bengal, Darjeeling distr., Teesta, 250 m, 10.X.1978, legit: Besuchet, Löbl, 1 female.



Figs. 1-3.

- 1: Holotype abdominal end with forceps,
and 2: genital armature of *Echinotermes ater* sp. n.
3: Holotype abdominal end with forceps of *Ctenisolabis aciculata* sp. n.
(Original).

Ctenisolabis aciculata sp. n.

Female with thoracic nota and abdominal tergites aciculate; shining, black; head coriaceous, antennae dark brown; legs light brown, femora bicolour, light brown apically, and brownish black basally. Head rounded, broad; postfrontal and coronal sutures finely visible; eyes large, more or less as long as the length of head behind eyes. Antennae 12-jointed; first joint long, a little longer than distance between antennal bases; second joint quadrate, third long, slightly longer than broad; fourth joint more or less as long as broad. Pronotum longer than broad; lateral margins straight, slightly expanded posteriorly; all angles rounded; posterior margin convex, median longitudinal furrow present. Tegmina and wings totally absent. Mesonotum with well marked lateral longitudinal keels, its latter straight. Metanotum typical. Abdomen fusiform, oval; ultimate tergite broad, well developed; posterior margin with two tubercles at median section (Fig. 3). Forceps specific, broad basally, slenderer and curved apically, apex pointed; cylindrical. Penultimate sternite rounded posteriorly.

Length of body with forceps: 11 mm.

Male unknown.

Holotype female: India, Meghalaya, Khasi Hills, au-dessus de Shillong, 1850-1950 m, 25.X.1978, legit: Besuchet, Löbl. — Deposited in the Muséum d'Histoire naturelle, Genève.

Identification key to the Indian species

- 1 (4) Antennae with 12 joints.
- 2 (3) Very small species, length of body with forceps: 6,5 mm. Cuticle of body punctulate. Posterior margin of ultimate tergite with large, rounded emargination medially *Ctenisolabis pusilla* Steinmann
- 3 (2) Relatively large species, length of body with forceps: 11-12 mm. Cuticle of body aciculate. Posterior margin of ultimate tergite with two tubercles at median section *Ctenisolabis aciculata* sp. n.
- 4 (1) Antennae with 13 joints. Moderately large species, length of body with forceps: 10-14 mm. Mesonotum ample, keels distinct but blunt.
- 5 (6) Cuticle of body with strongly punctured. Femora bicoloured, dark brown basally, and yellowish apically. Posterior margin of ultimate tergite with two small tubercles at median section *Ctenisolabis fletcheri* Burr
- 6 (5) Cuticle of body finely punctured. Femora unicoloured, dark brown. Posterior margin of ultimate tergite with two prominent tubercles at median section *Ctenisolabis loebli*, sp. n.

***Ctenisolabis loebli* sp. n.**

Female colour dark brownish black; legs unicoloured, dark brown. Cuticle of head, thoracic nota and abdominal tergites finely punctured. Head broad, tumid, rounded; postfrontal and coronal sutures indistinct; eyes large, more or less as long as the length of head behind eyes. Antennae 13-jointed; first joint long, slightly longer than distance between antennal bases; narrow basally, broader apically; second transverse, third joint comparatively long, more longer than broad. Pronotum longer than broad, lateral margins straight, but expanded posteriorly; posterior margin truncate; median longitudinal furrow present. Tegmina and wings absent. Mesonotum with prominent lateral longitudinal keels. Metanotum typical, transverse. Abdomen slender, fusiform, a little expanded medially. Ultimate tergite broad, posterior margin with two prominent tubercles at median section (Fig. 4). Forceps slightly broad basally, and narrower apically; branches cylindrical and pointed.

Length of body with forceps: 10,5 mm.

Male unknown.

Holotype female: India, W. Bengal, Darjeeling distr., Tigerhill, 2200-2300 m, 13.X.1978, legit: Besuchet, Löbl. — Deposited in the Muséum d'Histoire naturelle, Genève.

***Brachylabis philetas* Burr, 1901**

Brachylabis philetas Burr, 1901, *J. Bombay nat. Hist. Soc.*, 1901: 322. — Terra typica: Ceylon. — *Leptisolabis philetas* (Burr, 1901); BURR, *Ann. Mag. nat. Hist.*, (8) 2: 252. — *Nannisolabis philetas* (Burr, 1901); BURR, *Fauna of British India, Dermaptera*, p. 106.

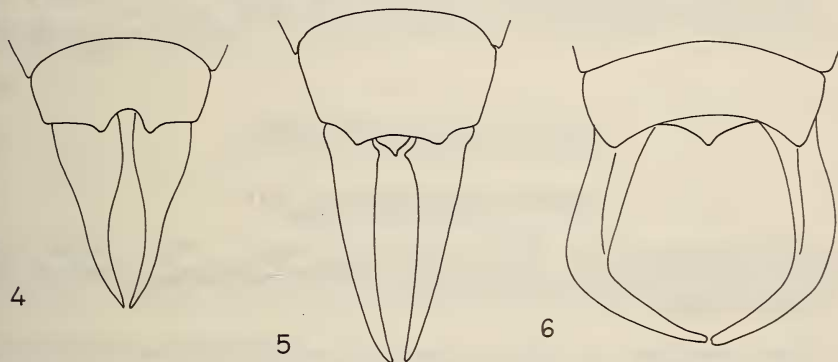
General colour blackish, antennae and legs dark brown. Cuticle strongly punctured. Head normal, more or less as broad as pronotum anteriorly; vertex tumid. Pronotum with transverse depression at anterior half. Tegmina and wings entirely absent. Mesonotum narrow, strongly impressed anteriorly, the posterior part being therefore slightly elevated, the lateral sides with prominent ridge longitudinally.

Distribution: Sri Lanka, and West Bengal.

Material examined: India, W. Bengal, Darjeeling distr., Algarah, 1800 m, 9.X.1978, legit: Besuchet, Löbl, 1 female.

Brachylabis tegminata sp. n.

Female general colour very dark brownish, a little reddish black; cuticle of head, pronotum and tegmina mat, metanotum and abdominal tergites strongly punctured, and shining. Antennae dark brown, sides of pronotum light brown. Head large, a little broader than pronotum; rounded posteriorly. Postfrontal and coronal sutures distinct.



FIGS. 4-6.

4: Holotype abdominal end with forceps of *Ctenisolabis loebli* sp. n.

5: Holotype ultimate tergite and forceps of *Brachylabis tegminata* sp. n.

6: Holotype abdominal end with forceps of *Isolabooides rimosus* sp. n. (Original).

Eyes small, shorter than length of head behind eyes. Antennae with very long joints; first joint slightly longer than distance between antennal bases; fourth joint more or less three times longer than broad. Pronotum quadratic, lateral margins parallel-sided; surface with transversal depression at posterior half. Tegmina present, but short, rudimentary, with well defined lateral longitudinal keels. Wings absent. Abdomen oval, expanded medially; tergites strongly punctured, shining black. Ultimate tergite broad, posterior margin as in fig. 5 Pygidium present. Forceps slender, a little trigonal basally, cylindrical apically; inner margins crenulate basally.

Length of body with forceps: 16,5 mm.

Male unknown.

Holotype female: India, W. Bengal, Darjeeling distr., Algarah, 1900 m, 11.X.1978, legit: Besuchet, Löbl. — Deposited in the Muséum d'Histoire naturelle, Genève. — 1 female: paratype: ditto, 1800 m, 9.X.1978, legit: Besuchet, Löbl, deposited in the Hungarian Natural History Museum, Budapest.

Identification key for Oriental species

- 1 (2) Pronotum slightly widened posteriorly. First antennal joint very long, rest joint small, globular. Body reddish, pronotum red, smooth, legs dirty yellow. Male forceps strongly curved *Brachylabis willeyi* (Burr)
- 2 (1) Pronotum parallel-sided laterally.
- 3 (4) Pronotum quadrate, more or less as long as broad. Tegmina present, but short, rudimentary, with lateral longitudinal keels. Abdominal tergites strongly punctured, shining. Antennal joints very long and slender, fourth joint three times longer than broad *Brachylabis tegminata* sp. n.
- 4 (3) Pronotum slightly longer than broad. Tegmina totally absent, mesonotum with lateral longitudinal keels. Abdomen with tergites fine punctured, mat. Antennal joints shorter, fourth joint twice longer than broad *Brachylabis philetas* Burr

Subfamily ANTISOLABIINAE Brindle

Antisolabis formicoides (Burr, 1911)

Nannisolabis formicoides Burr, 1911, *J. asiat. Soc. Bengal* 7: 781. — Terra typica: South India. *Antisolabis formicoides* (Burr, 1911); POPHAM & BRINDLE. 1966, *Entomologist* 99: 244.

General colour black or blackish, shining; first antennal joint black, second yellowish, rest joints dark brown, except 10-11 joints yellowish or whitish; legs yellow. Head a little longer than broad; eyes typical, small, slightly shorter than length of head behind eyes. Mesonotum normal, with transversal depression.

Distribution: India.

Material examined: India, W. Bengal, Darjeeling distr., Sevoke, 200 m, 7.X.1978, legit: Besuchet, Löbl, 3 females: ditto, Sukna, 200 m, 7.X.1978, legit: Besuchet, Löbl, 3 females; ditto, Kalimpong, 1300 m, 11.X.1978, legit: Besuchet, Löbl, 1 female; ditto, Teesta-Rangpo, 350 m, 12.X.1978, legit: Besuchet, Löbl, 1 female; Meghalaya, Khasi Hills, au-dessous de Chernapunjee, 1200 m, 26.X.1978, legit: Besuchet, Löbl, 1 female.

Family LABIDURIDAE Verhoeff, 1902

Subfamily NALINAE Steinmann, 1975

Nala lividipes (Dufour, 1820)

Forficula lividipes Dufour, 1820, *Anns Sci. nat.* 13: 340. — Terra typica: Spain. — *Nala lividipes* (Dufour, 1820); ZACHER 1911, *Ent. Rundsch.* 27: 29.

Colour dark brown or blackish brown in both sexes. Tegmina and wings well developed, tegmina with prominent lateral longitudinal keels, surface finely tuberculate. Legs short. Adomen depressed, sometimes widened medially or posteriorly. Ultimate tergite broad, posterior margin concave posteriorly. Forceps of male arcuate, without a basal large inner tooth, but with a very small basal and with or without a small ventro-median tooth towards apex.

Distribution: From southern Europe into North Africa and the eastern half of Africa of the South Sahara, into Arabia. Iran and eastwards into India and other parts of South-east Asia, China, Japan, Philippines, and Australia.

Material examined: India, Assam, Gauhati, 200 m, 24.X.1978, legit: Besuchet, Löbl, 9 males, and 17 females; ditto, 5.XI.1978, legit: Besuchet, Löbl, 6 males, and 15 females; ditto, Manas, 200 m, 22.X.1978, legit: Besuchet, Löbl, 1 male; W. Bengal, Darjeeling distr., Singla, 200 m, 17.X.1978, legit: Besuchet, Löbl, 1 male, and 1 female; ditto, Siliguri, 120 m, 19.X.1978, legit: Besuchet, Löbl, 1 male, and 1 female; Meghalaya, Garo Hills, 15 km au nord de Darugiri, 400 m, 4.XI.1978, legit: Besuchet, Löbl, 2 males; ditto, Songsak, 400 m, 2.XI.1978, legit: Besuchet, Löbl, 1 female; ditto, 7 km au sud de Dainadubi, 250 m, 4.XI.1978, legit: Besuchet, Löbl, 1 female; ditto, au-dessus de Tura, 700-900 m, 1.X.1978, legit: Besuchet, Löbl, 1 female; ditto, Rongrengiri, 400 m, 3.XI.1978 legit: Besuchet, Löbl, 1 female; ditto, Khasi Hills, Nongpoh, 700 m, 5.XI.1978, legit: Besuchet, Löbl, 1 male, and 1 female; Kumaon (UP), Kathgodam, Haldwani, 600 m, 6.X.1978, legit: Löbl, 1 female.

Subfamily LABIDURINAE Burr, 1909

Labidura riparia (Pallas, 1773)

Forficula riparia Pallas, 1773, *Reise Russ. Reiche*, 2: 727. — Terra typica: Siberia: Irtysh river. — *Labidura riparia* (Pallas, 1773); LEACH 1915, *Edinburgh Encycl.*, 9: 48.

Distribution: Cosmopolitan.

Material examined: India, Assam, Gauhati, 200 m, 5.XI.1978, legit: Besuchet, Löbl, 4 males, and 2 females; ditto, 22.XI.1978, legit: Besuchet, Löbl, 1 female; ditto, 24.X.1978, legit: Besuchet, Löbl, 4 females.

Forcipula afghana Steinmann, 1980

Forcipula afghana Steinmann, 1980, *Acta Zool. hung.* 26: 243. — Terra typica: Afghanistan.

General colour dark reddish brown or reddish black. Head tumid; postfrontal and coronal sutures distinct, but fine visible. Eyes relatively small, shorter than length of head behind eyes. Pronotum as broad as long, all margins rounded. Abdomen elongated, more or less parallel-sided. Male forceps straight, trigonal basally, cylindrical apically, with single small, but well marked tooth at inner margin. Female new for India and Nepal. Female forceps straight, simple.

Distribution: Afghanistan, India and Nepal.

Material examined: India, Garhwal (UP), entre Srinagar et Rudraprayag, 700 m, 27.X.1979, legit: Löbl, and 1 female; ditto, près de Chamoli à 16 km de Karnaprayag, 900 m, 26.X.1979, legit: Löbl, 3 males; Meghalaya, Garo Hills, Rongrengiri, 400 m,

3.XI.1978, legit: Besuchet, Löbl, 1 female. — Nepal, Prov. Bagmati, Burlang Bhanjyang, 2600 m, 6.IV.1981, legit: Löbl and Smetana, 1 male.

Forcipula indica Brindle, 1966

Forcipula indica Brindle, 1966, *Ann. Mag. nat. Hist.*, (13) 9: 265. — Terra typica India.

Female very similar to male, but slender, general colour dark reddish, brownish black; tegmina and wings fully developed. Forceps slender, elongated; trigonal basally, cylindrical and a little curved apically.

Distribution: India, Bhutan.

Material examined: India, Assam, Gauhati, 200 m, 24.X.1978, legit: Besuchet, Löbl, 1 female; ditto, Manas, 200 m, 23.X.1978, legit: Besuchet, Löbl, 2 females.

Family LABIIDAE Burr, 1909

Subfamily SPONGIPHORINAE Burr, 1911

Apovostox pygidiatus (Dubrony, 1879)

Spongovostox pygidiatus Dubrony, 1879, *Ann. Mus. civ. Stor. nat. Giacomo Doria* 14: 364. — Terra typica: Burma.

Head, pronotum, tegmina and wings very dark brown, or reddish, legs yellow, abdomen and forceps light brown. Male forceps specific, laminated, with two small, but well marked spines apically.

Distribution: South Oriental Region and Hawaii.

Material examined: India, Meghalaya, Khasi Hills, Mawphlang, 1800 m, 28.X.1978, legit: Besuchet, Löbl, 2 males.

Irdex nitidipennis (Bormans, 1894)

Spongiphora nitidipennis Bormans, 1894, *Annali Mus. civ. Stor. nat. Giacomo Doria* 14: 382. — Terra typica: Burma.

General colour dark blackish brown with slight variations on certain body parts. Head triangular, sutures obsolete. Tegmina and wings normal. Abdomen convex, parallel sides. Pygidium projecting, forming a flat horizontal plate, variously shaped. Female forceps simple, trigonal basally, cylindrical apically. Female pygidium smaller, convex above, strongly declivient, posterior margin straight with angles produced into minute points.

Distribution: India, Nepal and Philippines.

Material examined: Nepal, Prov. Bagmati, Gokana For. nr. Kathmandu, 1400 m, I.IV.1981, legit: Löbl and Smetana, 4 females.

Spongovostox semiflavus (Bormans, 1894)

Spongiphora semiflavus Bormans, 1894, *Anralli Mus. civ. Stor. nat. Giacomo Doria* 14: 385. — Terra typica: Burma.

Body dark reddish brown, shining, except wings, yellowish laterally. Abdomen blackish chestnut. Male pygidium broad and flat, female pygidium smaller, declivent, with straight posterior margin.

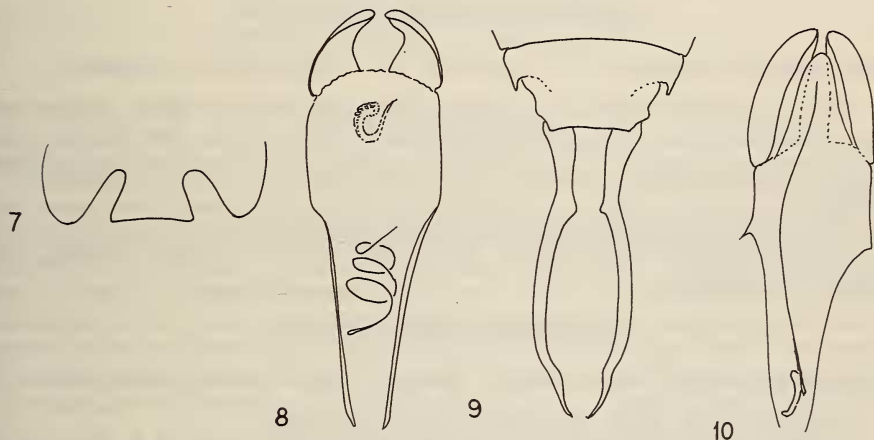
Distribution: India and Burma.

Material examined: India, Assam, Manas, 200 m, 22.X.1978, legit: Besuchet, Löbl, 1 female.

Subfamily ISOLABOIDINAE Brindle, 1978

Isolaboides rimosus sp. n.

Male general colour dark reddish brown; head blackish, antennae dark brown, and legs light brown. Head broad, tumid, postfrontal and coronal sutures well marked. Eyes comparatively small, slightly shorter than length of head behind eyes. Antennae 17-jointed; first joint normal, shorter than distance between antennal bases; second



FIGS. 7-10.

- 7: Holotype penultimate sternite,
and 8: genital armature of *Isolaboides rimosus* sp. n.
9: Holotype ultimate stergite and forceps,
and 10: genital armature of *Liparura montuosa* sp. n. (Original).

quadrate, third joint long, longer than fourth or fifth. Pronotum a little transverse; lateral margins parallel-sided, all angles rounded; median longitudinal furrow present. Tegmina and wings totally absent. Adomen elongated, a little expanded medially; cuticle of tergites punctured. Ultimate tergite transverse, posterior margin of last tergite as in fig. 6. Pygidium present, trigonal. Forceps symmetrical, trigonal basally, cylindrical apically; strongly curved. Penultimate sternite (Fig. 7) characteristic, posterior margin excised, procuded a small median portion. Genitalia (Fig. 8) specific, median plate broaded apically, and narrow basally; virga within genital lobe rudimentary and spiral. External paramere broad basally, and a little sclerotized laterally.

Length of body with forceps: 13 mm.

Female unknown.

Holotype male: India, Gahrwal (UP), 6 km E. de Dhanolti, 2300 m, 21.X.1979, legit: Ivan Löbl, gen. prep. No. 785, det. Dr. H. Steinmann. — Deposited in the Muséum d'Histoire naturelle, Genève.

Its nearest ally is *I. burri* (Borelli, 1909), with the following differences:

	<i>I. rimosus</i> sp. n.	<i>I. burri</i> (Bovelli)
Pronotum	with lateral margins parallel-sided	with lateral margins expanded posteriorly
Leg	long	short
Penultimate sternite	excised posteriorly	simple, normal
Virga	short	very long

Subfamily LABIINAE Burr, 1911

Chaetolabia appendicina (Menozzi, 1941)

Labia appendicina Menozzi, 1941, *Mushi* 13: 64. — Terra typica: Micronesia.

Head, pronotum, femora, and abdominal tergites blackish, tibiae, tegmina, and forceps yellowish brown. Wings brownish at inner, and yellow at outer margins. Male forceps strongly trigonal, more or less straight, pygidium present, with two small tubercles apically.

Distribution: Micronesia, and South Oriental Region.

Material examined: India, Assam, Manas, 200 m, 22.X.1978, legit: Besuchet, Löbl, 1 male, and 2 females.

Chaetospania foliata (Burr, 1911)

Platylabia foliata Burr, 1911, *Stett. ent. Zeit.* 72: 338. — Terra typica: Ceylon.

Distribution: Sri Lanka, Buru Island, India, and Nepal.

Material examined: Nepal, Prov. Bagmati, Gokana For. nr. Kathmandu, 1440 m, 31.III.1981, legit: Löbl and Smetana, 3 males.

Labia curvicauda (Motshulsky, 1863)

Forficesila curvicauda Motshulsky, 1863, *Bull. Soc. Nat. Moscou* 36: 2. — Terra typica: unknown locality.

Distribution: Cosmopolitan.

Material examined: India, Assam, Manas, 200 m, 23.X.1978, legit: Besuchet, Löbl, 1 female; ditto, 22.X.1978, legit: Besuchet, Löbl, 1 female; ditto, Kumaon (UP), Bhim Tal, 1450-1550 m, 5.X.1979, legit: Löbl, 9 males, and 8 females; Meghalaya, Khasi Hills, Cherrapunjee, 26.X.1978, 1200 m, legit: Besuchet, Löbl, 5 females; ditto, Garo Hills, Songsak, 400 m, 2.XI.1978, legit: Besuchet, Löbl, 1 male; ditto, Dainadubi, 250 m, 4.XI.1978, legit: Besuchet, Löbl, 5 males, and 4 females; ditto, W. Bengal, Darjeeling distr., entre Teesta et Rangpo, 350 m, 12.X.1978, legit: Besuchet, Löbl, 1 male, and 3 females.

Family CHELISOCHIDAE Burr, 1907

Subfamily CHELISOCHINAE Burr, 1907

Proreus simulans (Stål, 1860)

Forficula simulans Stål, 1860, *Eug. Resa, Ins.*, p. 302. — Terra typica: Burma.

First antennal joint long, slightly longer than distance between antennal bases. Pronotum elongated, lateral margins expanded posteriorly. Tegmina and wings fully developed, yellow with dark brown stripes at sutural margins. Female forceps slender, long, a little trigonal basally, cylindrical apically; inner margins crenulate.

Distribution: Burma, India, Malay Archipelago.

Material examined: India, Assam, Gauhati, 200 m, 24.X.1978, legit: Besuchet, Löbl, 2 females.

Family FORFICULIDAE Burr, 1907

Subfamily COSMIELLINAE Steinmann, 1975

Liparura montuosa sp. n.

Male general colour dark reddish brown; end of abdomen and forceps black; shining. Head large, tumid; postfrontal sutures and coronal suture well marked; eyes prominent but a little shorter than length of head behind eyes. Antennae 10-jointed; first joint very long, longer than distance between antennal bases; second joint transverse, third long, about as long as fourth. Pronotum transverse, a little broader than long; median longitudinal furrow present posterior margin rounded, lateral margins parallel-sided. Tegmina short, with well marked lateral longitudinal keels. Wings absent. Abdominal tergites 3-4 with prominent lateral tubercles. Ultimate tergite narrowed posteriorly; lateral surface with single spine. Penultimate sternite normal, rounded posteriorly. Forceps (Fig. 9) elongated, the branches are slender, with dorsal tooth at basal third. Genitalia (Fig. 10) slender, simple; central parameral plate with elongated virga; basal vesicle specific. External parameres well developed, a little sclerotized.

Female very similar to male, but forceps slender, tapering, contiguous.

Length of body with forceps in both sexes: 14-18 mm.

Holotype male: Nepal, Prov. Bagmati, Dobate Ridge, NE Barahbise, 2700 m, 7.V.1981, legit: Ivan Löbl and Ales Smetana, gen. prep. No. 788, det. Dr. H. Steinmann, ditto, 2500 m, 10.V.1981, legit: Löbl and Smetana, 1 male paratype, and 2800 m, 2.V.1981, legit: Löbl and Smetana, 1 female paratype. — Deposited in the Muséum d'Histoire naturelle, Genève. — Ditto, 2800 m, 2.V.1981., legit: Löbl and Smetana, 1 male paratype, deposited in the Hungarian Natural History Museum, Budapest.

Its nearest ally is *L. punctata* Burr, 1910, with the following differences:

	<i>L. montuosa</i> sp. n.	<i>L. punctata</i> Burr
Tegmina	well developed	short
Male forceps	with dorsal tooth	without dorsal tooth
Ultimate tergite	with lateral spine	without lateral spine

Subfamily OPISTHOCOSMIINAE Verhoeff, 1902

Timomenus ares (Burr, 1900)

Forficula ares Burr, 1900, *Ann. Mag. nat. Hist.*, (7) 6: 100. — Terra typica: Borneo.

Pronotum a little transverse, median longitudinal furrow indistinct; posterior margin rounded. Tegmina and wings fully developed. Abdomen slender, sides of tergites smooth. Male forceps short or longer, basal half more or less curved, and laminate.

Distribution: Borneo, India, and Nepal.

Material examined: India, Kumaon (UP), Bhim Tal, 1450-1550 m, 5.X.1979, legit: Löbl, 1 male, and 3 females; ditto, Garhwal (UP), au-dessous de Joshimath, 2100 m, 27.X.1979, legit: Löbl, 1 female; Nepal, Prov. Bagmati, Gokana For. nr. Kathmandu, 1400 m, 31.III., and I.IV.1981, legit: Löbl and Smetana, 3 males.

Eparchus oberthuri Borelli, 1912

Eparchus oberthuri Borelli, 1912, *Bull. Mus. natn. Hist. nat. Paris*, 1912: 19. — Terra typica: Bhutan.

Distribution: Bhutan, Nepal, India.

Material examined: Nepal, Prov. Bagmati, Gokana, For. nr. Kathmandu, 1400 m, 31.III., and I.IV.1981, legit: Löbl and Smetana, 4 males, and 2 females; ditto, Malemchi Khola nr. Malemchi, 2100 m, 15.IV.1981, legit: Löbl and Smetana, 1 female; India, Assam, Manas, 200 m, 21-22.X.1978, legit: Besuchet, Löbl, 2 females; Kumaon (UP), Kathgodam, Haldwani, 600 m, 6.X.1979, legit: Löbl, 1 female; Meghalaya, Garo Hills, au-dessus de Tura, 700-900 m, 1.X.1978, legit: Besuchet, Löbl, 2 females; ditto, Songsak, 400 m, 2.XI.1978, legit: Besuchet, Löbl, 1 female; ditto, Khasi Hills, Nongpoh, 700 m, 5.XI.1978, legit: Besuchet, Löbl, 1 female; W. Bengal, distr. Darjeeling, 13 km. N. de. Ghoom, 1500 m, 15.X.1978, legit: Besuchet, Löbl, 1 female; ditto, Sevoke, 200 m, 7.X.1978, legit: Besuchet, Löbl, 1 female; ditto, Singla, 300 m, 17.X.1978, legit: Besuchet, Löbl, 2 females; ditto, Teesta, 250 m, 10.X.1978, legit: Besuchet, Löbl, 1 female; ditto, Tonglu, 3100 m, 16.X.1978, legit: Besuchet, Löbl, 1 female.

Subfamily ALLODAHLINAE Steinmann, 1975

Allodahlia scabriuscula (Serville, 1839)

Forficula scabriuscula Serville, 1839, *Hist. Nat., Orth.*, p. 38. — Terra typica: India.

Distribution: Bhutan, India, Burma, Southern China, Java, Borneo, and Sumatra.

Material examined: India, Meghalaya, Khasi Hills, au-dessous de Cherrapunjee, 1200 m, 26.X.1978, legit: Besuchet, Löbl, 13 males, and 5 females; ditto, Nongpoh, 700 m, 5.XI.1978, legit: Besuchet, Löbl, 1 female.

Allodahlia dineshi Gangola, 1965

Allodahlia dineshi Gangola, 1965, *Entomologist* 98: 235. — Terra typica: India: Kumaon Hills.

Distribution: India, Nepal.

Material examined: Nepal, Prov. Bagmati, Dobate Ridge, NE Barahbise, 3000 m, 7.V.1981, legit: Löbl and Smetana, 1 female.

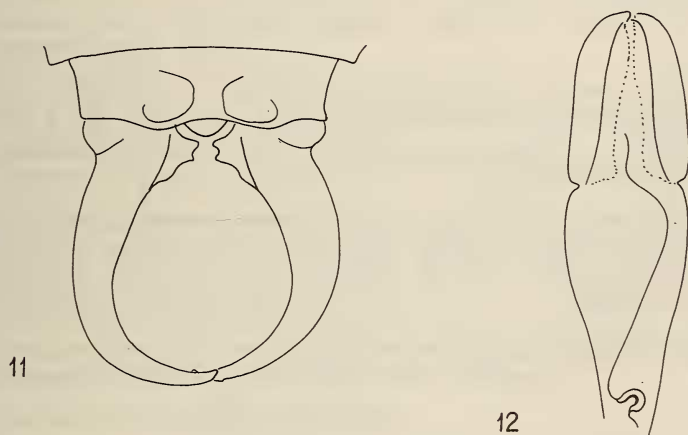
Subfamily ANECHURINAE Burr, 1907

Anechura svenhedini Bey-Bienko, 1933

Anechura svenhedini Bey-Bienko, 1933, *Arkiv f. Zool.* 25A, No. 20: 4. — Terra typica: China.

Distribution: China: Kansu, Szechuan, Tibet, India, Nepal.

Material examined: India, Kumaon (UP), Rangarh, 2000 m, 9.X.1979, legit: Löbl, 5 males, and 6 females; ditto, Chaubattia, 1800-1950 m, 12-14.X.1979, legit: Löbl, 1 male and 1 female; Nepal, Prov. Bagmati, Tarke Ghyang, 2200 m, 19.IV.1981, legit: Löbl



FIGS. 11-12.

11: Holotype ultimate tergite and forceps,
and 12: genital armature of *Oreasiobia piger* sp. n. (Original).

and Smetana, 1 female; ditto, Sundarijal, 2000 m, 4.IV.1981, legit: Löbl and Smetana, 1 female; India, Garhwal (UP), Mussoorie, 1700 m, 19.X.1979, legit: Löbl, 2 males; ditto, Bhatwari, 1400 m, 23.X.1979, legit: Löbl, 1 female; W. Bengal, Darjeeling distr., Algarah, 1800 m, 9.X.1978, legit: Besuchet, Löbl, 2 males, and 5 females; ditto, 7 km d'Algarah, 1900 m, 11.X.1978, legit: Besuchet, Löbl, 1 female; India, Meghalaya, Khasi Hills, Mawphlang, 1800 m, 28.X.1978, legit: Besuchet, Löbl, 1 male, and 1 female; ditto, Shillong, 1850-1950 m, 25.X.1978, legit: Besuchet, Löbl, 2 males, and 7 females.

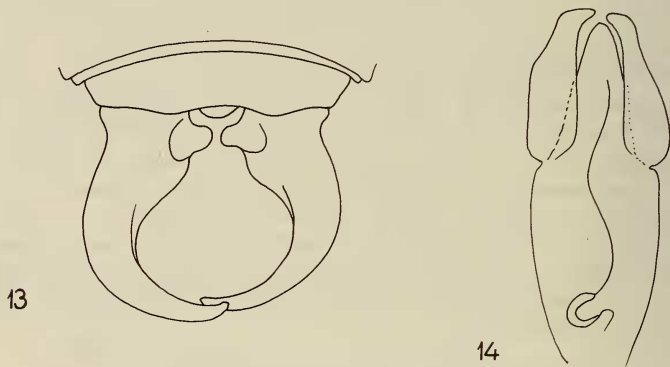
Oreasiobia piger sp. n.

Male general colour dark brownish black; shining. Head very broad, flattened. Eyes comparatively small, slightly shorter than length of head behind eyes. Antennae 12-jointed; first antennal joint normal, slightly shorter than distance between antennal bases; second more or less quadrate; third joint long, longer than fourth. Postfrontal and coronal sutures obsolete. Pronotum transverse; lateral margins parallel-sided; all angles rounded. Tegmina and wings fully developed, shining. Abdomen depressed, oval, expanded medially; ultimate tergite without peg-shaped chitinous appendages. Pygidium present, but small. Forceps strongly curved; laminate basally, and cylindrical apically (Fig. 11); branches with two blunt tubercles at inner margin basally. Penultimate sternite normal, rounded posteriorly. Genitalia (Fig. 12) comparatively large, narrow; virga within genital lobe long, basal vesicle curved. External paramere a little sclerotized, large.

Length of body with forceps: 14 mm.

Female unknown.

Holotype male: Nepal, Prov. Bagmati, below Tarke Ghyang, 2600 m, 25.IV.1981, legit: I. Löbl and Smetana, gen. prep. No. 782, det. Dr. H. Steinmann. — Deposited in the Muséum d'Histoire naturelle, Genève.



FIGS. 13-14.

13: Holotype ultimate tergite and forceps, and 14: genital armature of *Oreasiobia similis* sp. n. (Original).

Oreasiobia similis sp. n.

Male general colour dark brownish, and yellowish brown; head dark apically, and lighter basally; sides of pronotum light brown. Head broad, tumid; postfrontal and coronal sutures present. Eyes typical of genus, shorter than length of head behind eyes. Antennae 12-jointed; first joint short, shorter than distance between antennal bases; second small; third long, longer than fourth. Pronotum strongly transverse; lateral margins parallel-sided, or a little expanded posteriorly; all angles rounded.

Tegmina comparatively short, a little rudimentary; wings absent. Abdomen typical, oval, and depressed; ultimate tergite without peg-shaped chitinous appendages. Pygidium very small; forceps (Fig. 13) similar to *O. piger* sp. n., but shorter, and branches with larger inner tooth basally. Penultimate sternite simple. Genitalia (Fig. 14) with external parameres widened, and curved apically; basal vesicle large.

Female very similar to male, but colour darker, and forceps simple, tapering, slender, contiguous.

Length of body with forceps: male: 14-15 mm, female: 12-13 mm.

Holotype male: Nepal, Prov. Bagmati, above Shermathang, 2900 m, 26.IV.1981, legit: I. Löbl and A. Smetana, gen. prep. No. 783, det. Dr. H. Steinmann. — ditto, 2 paratypes females; ditto, Kutumsang, 2200-2400 m, 6.IV.1981, legit: I. Löbl and A. Smetana, 1 female, and ditto, 2500-2700 m, 7.IV.1981, legit: I. Löbl and A. Smetana, 1 female. — Deposited in the Muséum d'Histoire naturelle, Genève. — Nepal, Prov. Bagmati, above Shermathang, 2900 m, 26.IV.1981, legit: I. Löbl, and A. Smetana, gen. prep. No. 784, det. Dr. H. Steinmann, male paratype, and ditto, 1 female paratype deposited in the Hungarian Natural History Museum, Budapest.

Identification key to the Oreasiobia species

- 1 (4) Dorsal surface of ultimate tergite of the male with a long, peg-shaped chitinous appendage each, apically considerably projecting beyond posterior margin of plate.
- 2 (3) The paired, peg-like appendage on dorsal surface of ultimate male tergite with a very wide base. Pygidium wide, visibly wider than long. Basal vesiculum of virga in male genitalia large, torquate. — Distribution: Turkestan, Afghanistan, Kashmir *fedtschenkoi* (Saussure, 1874)
- 3 (2) The paired, peg-like appendage on dorsal surface of ultimate male tergite with narrow base. Pygidium narrow, visibly longer than wide. Basal vesiculum of virga in male genitalia straight, small and narrow. — Distribution: China: Fukien *chinensis* Steinmann, 1974
- 4 (1) Dorsal surface of ultimate tergite of the male without peg-shaped chitinous appendages. Pygidium small, slightly wider than long.
- 5 (8) Tegmina fully developed, wings present.
- 6 (7) Male forceps comparatively short, strongly curved, branches rounded. Male genital organ comparatively long, basal vesicle of virga curved. Inner margins of forceps without rounded parts basally. — Distribution: Nepal *piger* sp. n.
- 7 (6) Male forceps comparatively long, branches with straight section medially; inner margins finely dentate, with lobiform rounded part basally. Male genital organ comparatively short, basal vesiculum of virga within genital lobe sigmoid, well discernible. — Distribution: India: Kashmir *stoliczkayi* (Burr, 1912)
- 8 (5) Tegmina shorter, but present, wings entirely absent. Male forceps similar to *O. piger* sp. n., but shorter; inner margin with blunt tooth basally. Male genital organ normal, large, external parameres characteristic, curved apically. — Distribution: Nepal *similis* sp. n.

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